



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

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### FINAL AIR QUALITY OPERATING PERMIT

Issued by the Massachusetts Department of Environmental Protection ("The Department") pursuant to its authority under M.G.L. c. 111, §142B and §142D, 310 CMR 7.00 et seq., and in accordance with the provisions of 310 CMR 7.00: Appendix C.

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**ISSUED TO ["the Permittee"]:**

Pinetree Power Fitchburg, Inc.  
170 Fitchburg Road  
Westminster, MA 01473-1647

**FACILITY LOCATION:**

Pinetree Power Fitchburg, Inc.  
170 Fitchburg Road  
Westminster, MA 01473-1647

**NATURE OF BUSINESS:**

Electric Power Generation

**RESPONSIBLE OFFICIAL:**

Name: Michael T. Buckman  
Title: Plant Manager

**INFORMATION RELIED UPON:**

Application No. 108009  
Transmittal No. 108009  
Administrative Amendment Tr X255499

**FACILITY IDENTIFYING NUMBERS:**

SSEIS ID. AQCR 118/Plant ID 61  
FMF FAC NO. 204855  
FMF RO NO. 194030

**SIC CODE:** 4911

**FACILITY CONTACT PERSON:**

Name: Michael T. Buckman  
Title: Plant Manager  
Phone: (508) 874-2966 extension 2

**This operating permit shall expire on April 28, 2009.**

For the Department of Environmental Protection,

This final document copy is being provided to you electronically by the  
Department of Environmental Protection. A signed copy of this document  
is on file at the DEP office listed on the letterhead.

Roseanna E. Stanley, Acting Permit Chief

date signed April 23, 2013  
Date

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## **SPECIAL CONDITIONS FOR OPERATING PERMIT**

A legend to Abbreviated Terms found in the following Tables is located in Section 28 of the Operating Permit.

### **1. PERMITTED ACTIVITIES**

In accordance with the provisions of 310 CMR 7.00: Appendix C and applicable rules and regulations, the Permittee is authorized to operate the air emission unit as shown in Table 1 and exempt, and insignificant activities as described in 310 CMR 7.00:Appendix C(5)(h) and (i). The unit described in Table 1 is subject to the terms and conditions shown in Sections 4, 5, and 6 and to other terms and conditions as specified in this permit. Emissions from the exempt activities shall be included in the total facility emissions for the emission-based portion of the fee calculation described in 310 CMR 4.00 and this permit.

### **DESCRIPTION OF FACILITY AND OPERATIONS**

The Permittee is named Pinetree Power Fitchburg, Inc. with a place of business located at 170 Fitchburg Road, Westminster, Massachusetts, operating an electric generating facility.

The Permittee operates a multi-fuel fired (i.e., wood, natural gas, landfill gas and paper cubes) electric generator facility and associated operations. Wood is delivered to the facility by truck and transferred to the wood-handling system. The wood-handling system consists of one (1) truck scale, two truck dumpers with a load capacity of 55 tons, and a reclaim and conveying system which includes a magnetic separator, a fuel screen and reduction hog to remove non-combustibles and reduced oversized woodchips to a nominal 2"x2". The wood is then transferred to the wood-storage building. The building capacity is approximately 3,500 tons. The wood is then conveyed from the storage building to the boiler surge bins by covered belt conveyors. The screw feeder is equipped with variable speed drives responding to signals from the boiler combustion control system. The wood-fuel is introduced into the boiler through three pneumatic wood-fuel distributors. The wood is partially burned in suspension and on the Harrington grate designed by Riley Stoker. The injection of over fire air and under fire air provide for complete combustion. Natural gas is used as a backup fuel for facility startups and to maintain adequate boiler temperatures on an as-needed basis. The Permittee shall conduct soot blowing a minimum of once per day or more frequently if necessary to prevent a condition of air pollution from occurring.

Landfill gas used as a supplemental fuel is transferred from the Westminster landfill through a gas extractor system. During boiler outages (scheduled maintenance or malfunctions) the landfill gas pumping system is shutoff and vented to a flare located at the Westminster landfill.

The paper cubes used as supplemental fuel is delivered to the facility by truck in a self-unloaded trailer and discharged into a leak-proof chipper/blower unit. The grounded paper cubes

are then delivered pneumatically through a conduit into the furnace and burnt in suspension.

The burning of wood, natural gas, landfill gas, and Paper Derived Supplemental Fuel (PDSF) will result in emissions to the ambient air of Particulate Matter (PM), Sulfur Dioxide (SO<sub>2</sub>), Nitrogen Oxides (NO<sub>x</sub>), Carbon Monoxide (CO) and Volatile Organic Compounds (VOC's). Urea used to control Oxides of Nitrogen emissions thermally decomposes to form ammonia when injected into the furnace. Un-reacted Ammonia will exit the furnace as ammonia slip (NH<sub>3</sub>).

The emissions from the boiler shall be emitted to the ambient air through an existing round metal stack. The stack height shall be 180-feet above ground level with an inside exit diameter of six-feet which provides for an exit velocity of 52 feet per second at a temperature of 340°F.

## 2. EMISSION UNIT IDENTIFICATION

The following emission unit (Table 1) is subject to and regulated by this operating permit:

Table 1			
EU#	DESCRIPTION OF EMISSION UNIT	EU DESIGN CAPACITY	POLLUTION CONTROL DEVICE
EU#1	Riley Stoker wood fired boiler equipped with an automatic feed system, underfire and overfire air ports.	260 MMBtu/hr. input	Particulate Matter (PM) - controlled by a dry multiclone (primary control device) and a fabric filter collector (secondary control device).  Nitrogen Oxides (NO <sub>x</sub> ) - controlled by the use of selective non-catalytic reduction technology (SNCR).

## 3. IDENTIFICATION OF EXEMPT ACTIVITIES

The following are considered exempt activities in accordance with the criteria contained in 310 CMR 7.00: Appendix C(5)(h):

Table 2	
DESCRIPTION OF CURRENT EXEMPT ACTIVITIES	REASON
The list of current exempt activities is contained in the Operating Permit application and shall be updated by the Permittee to reflect changes at the facility over the permit term. An up-to-date copy of exempt activities list shall be kept on-site at the facility and a copy shall be submitted to the Department's Regional Office.	310 CMR 7.00:Appendix C (5)(h)

#### 4. APPLICABLE REQUIREMENTS

##### A. EMISSION LIMITS AND RESTRICTIONS

The Permittee is subject to the emission limits/restrictions as contained in Table 3 below

Table 3					
EU#	Fuel/Raw Material	Pollutant	Emission Limit <sup>5</sup>	Restrictions	Applicable Regulation and/or (Approval No.)
EU# 1	-Wood <sup>6</sup> -PDSF -Landfill Gas -Natural Gas	PM	0.016 lb/MMBtu <sup>1</sup> and 4.16 lb/hr <sup>2</sup> =18.2 TPY <sup>3</sup>	a. Boiler – Design capacity shall not exceed 260 MMBtu/hr at all times of operation.  b. Monthly Fuel Usage shall not exceed: Wood – 21,714 tons Landfill gas – 73.0 MMCF PDSF – 2,808 Tons Natural Gas – 20 MMCF  c. 12 month rolling Fuel Usage shall not exceed: Wood – 180,000 tons Landfill gas – 876 MMCF PDSF – 33,696 Tons Natural Gas – 240 MMCF	Transmittal # W21004212(A)
		SO <sub>2</sub>	0.03 lb/MMBtu and 7.8 lb/hr =34.2 TPY		
		NOx	0.175 lb/MMBtu and 45.5 lb/hr =199.3 TPY		
		VOC	0.03 lb/MMBtu and 7.8 lb/hr =34.2 TPY		
		CO	0.20 lb/MMBtu and 52.0 lb/hr = 227.8 TPY		
		PB	0.0002 lb/MMBtu and 0.05 lb/hr = 0.22 TPY		
		NH <sub>3</sub>	2.04 lb/hr (10PPMVD) <sup>4</sup> = 8.9 TPY		
		Visible Emissions	Opacity exclusive of uncombined water shall not exceed 10% for a period or aggregate period of time in excess of 2 minutes during any one hour provided that at no time during the said 2 minutes shall the opacity exceed 20%.		

1. lb/MMBtu = pounds per million British thermal units
2. lb/hr= pounds per hour
3. TPY = twelve month rolling total
4. PPMVD = parts per million volume dry
5. Average period for PM, VOC, Pb and NH<sub>3</sub> is a 3 hour arithmetic; for SO<sub>2</sub> is a 3-hour arithmetic and 30 day rolling; for NOx is a 30 day rolling and for CO is a 24-hour arithmetic.
6. Moisture content is based on 37.5% with a heating value of 5469 BTU per pound (BTU/lb)

## B. COMPLIANCE DEMONSTRATION

The Permittee is subject to the monitoring/testing, recordkeeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10) and applicable requirements contained in Table 3.

The Permittee shall comply with the requirements in Table 4, 5 and 6 as a requirement of the plan approval letter #W21004212(A) dated April 24, 2002.

Table 4	
EU#	MONITORING/TESTING REQUIREMENTS
EU# 1	<p>In accordance with the provisions of the Final 7.02 Air Quality Plan Approval Transmittal # W21004212(A) The Permittee is subject to the terms and conditions presented in Table 4 and to other terms and conditions reference herein.</p> <ol style="list-style-type: none"> <li>1. Monitoring Devices – The Permittee shall maintain the following continuous emission monitors (CEM's) in an accurate operating condition to monitor continuously the following parameters in accordance with the Plan Approval #W21004212(A). The CEM's (except NH<sub>3</sub>) shall comply with 40 CFR 60, Appendix B (Performance Specifications), and 40 CFR 60, Appendix F (Quality Control Procedures). <ol style="list-style-type: none"> <li>a) Oxygen (O<sub>2</sub>)</li> <li>b) Oxides of Nitrogen (NO<sub>x</sub>)</li> <li>c) Carbon Monoxide (CO)</li> <li>d) Opacity</li> <li>e) Sulfur Dioxide (SO<sub>2</sub>)</li> <li>f) Ammonia (NH<sub>3</sub>)</li> </ol> </li> <li>2. Recording Devices – The Permittee shall maintain the following recording devices in an accurate operating condition in accordance with Plan Approval #W21004212(A). <ol style="list-style-type: none"> <li>a) Fuel consumption Monthly- wood (tons), landfill gas (MMCF) and PDSF (tons) 12-Month Rolling – wood (tons), landfill gas (MMCF) and PDSF (tons)</li> <li>b) total steam flow (lb/hr)</li> <li>c) flue gas temperature (°F) at boiler exit</li> <li>d) heat input (MMBtu/hr)</li> </ol> </li> <li>3. The Permittee shall obtain and maintain a shipping receipt from the fuel supplier for each shipment of wood fuel delivered to demonstrate compliance with 310 CMR 7.00 Air Pollution Regulations. The shipping receipt must certify that the shipment complies with the wood fuel as defined in 310 CMR 7.00 Air Pollution Regulations. The Department may require testing of the wood fuel if the shipping receipt does not clearly demonstrate compliance in accordance with 310 CMR 7.00.</li> <li>4. MONITORING - Equipment or emission monitoring systems installed for the purpose of documenting compliance with this APPROVAL shall be installed, calibrated, maintained and operated by the Permittee in sufficient manner to ensure continuous and accurate operations at all times except for routine maintenance, calibration and repair as may be indicated by the malfunction in accordance with Plan Approval #W21004212(A).</li> </ol>

Table 4 Continued	
EU#	MONITORING/TESTING REQUIREMENTS
EU#1	5. Compliance with the allowable opacity limits shall be determined in accordance with EPA Method 9, as specified in 40 CFR 60, Appendix A and in accordance with 310 CMR 7.00 Appendix C (9)(b).
	6. Testing Requirements – In accordance with 310 CMR 7.04(4)(a) each fuel utilization facility shall be inspected and maintained in accordance with the manufacturer’s recommendation and tested for efficient operation at least once in each calendar year. The results of said inspection, maintenance, testing and the date upon which it was performed shall be recorded and posted conspicuously on or near the permitted area.
	7. Emission testing to demonstrate compliance with the emission limits specified in Table 3 shall be in accordance with EPA approved reference test methods unless otherwise approved by EPA and the Department or unless otherwise specified and shall include test Methods 1 through 4 and for Particulate Matter (Method 5), Sulfur Dioxide (Method 6C), Nitrogen Oxides (Method 7E), Carbon Monoxide (Method 10), Gaseous Organic Compounds (Method 18) and Total Gaseous Organic Concentration (Method 25A) as a requirement of 310 CMR 7.13.
	8. In accordance with 310 CMR 7.13, the Department may require testing for any pollutants if deemed necessary to ascertain the mass emission rates and relationship to equipment design and operation.
	9. The Permittee shall conduct stack testing when the Department has determined that such stack testing is necessary to ascertain compliance with the Department's regulations or design approval provisos as a requirement of Plan Approval #W21004212(A). Such stack testing shall be:
	a) conducted by a person knowledgeable in stack testing, and;
	b) conducted in accordance with procedures contained in a test protocol which has been approved by the Department, and;
	c) in the presence of a representative of the Department when such is deemed necessary in accordance with 310 CMR 7.13(1).
	10. The Permittee shall conduct fluorescent black light testing on the baghouse control system twice per calendar year in order to evaluate the condition of the baghouse in accordance with Plan Approval # W21004212(A).
	11. The Permittee shall continually monitor the pressure drop for each of the six components in the baghouse and the overall pressure drop across the baghouse in accordance with the Plan Approval #W21004212(A).
	12. The Permittee shall continually monitor the operations of the entire facility such that necessary information is available for the preparation of the Source Registration/Emission Statement Forms as required by 310 CMR 7.12.

**Table 5**

EU#	RECORD KEEPING REQUIREMENTS
EU#1	<p>In accordance with the provisions of the Final 7.02 Air Quality Plan Approval Transmittal # W21004212(A) the Permittee is subject to the terms and conditions presented in Table 5 and to other terms and conditions reference herein.</p> <p>The Permittee shall maintain on site the following records for five (5) years from the date of generation and have the records readily available to the Department and EPA personnel in accordance with the Plan Approval #W21004212(A) and 310 CMR 7.00 Appendix C (10)(b).</p> <ol style="list-style-type: none"> <li>1. All CEM data.</li> <li>2. Operating and Maintenance log books, (these log books shall contain the following information on a daily basis.             <ol style="list-style-type: none"> <li>a) date and hours of operation and date and time of startups and shutdowns</li> <li>b) date, time and description of maintenance performed on the continuous monitoring devices, boiler and turbine</li> </ol> </li> <li>3. Fabric Filter Collector and NOx knock-out system and repair logs including as a minimum, the specific repairs and maintenance performed, the overall condition of the control equipment, and the date(s) of which the units were inspected.</li> <li>4. Fuel inventory, total amount of wood fuel and paper cubes on site on a daily basis.</li> <li>5. Name of company delivering the wood fuel and paper cubes including as a minimum, date of delivery, amount of fuel (tons) and truck ID number.</li> <li>6. Name of company producing the wood fuel and paper cubes.</li> <li>7. Calibration of all monitoring devices, date, time, and who performed the calibration.</li> <li>8. Boiler, emission control or monitoring device malfunctions, time and date of malfunction, description of event, time and date of corrective action taken and description of said action and date reported to DEP.</li> <li>9. Fluorescent black light test results from the baghouse and routine maintenance.</li> <li>10. Upon completion of the fluorescent black light test, facility personnel shall maintain the following records.             <ol style="list-style-type: none"> <li>a) the date the test was performed</li> <li>b) name of person or consultant performing the test</li> <li>c) list any deficiencies on the baghouse operational parameters and emission test results</li> </ol> </li> <li>11. Inspection, maintenance, and testing results of the emission unit and the date upon which it was performed shall be in accordance with 310 CMR 7.04(4)(a).</li> <li>12. Records of emissions testing conducted to demonstrate compliance with the applicable requirements in Table 3 shall be in accordance with 310 CMR 7.13(1)(d).</li> <li>13. The Permittee shall maintain sufficient records of its operations and monitoring information for the preparation of a Source Registration/Emission Statement Form as required by 310 CMR 7.12</li> <li>14. The Permittee shall record the overall pressure drop (inches of water) continuously across the baghouse in accordance with Plan Approval #W21004212(A).</li> <li>15. In accordance with 310 CMR 7.00: Appendix C (10)(b), maintain records of all monitoring data and supporting information on site for a period of at least five (5) years from the date of the monitoring sample, measurement, report or initial operating permit application..</li> </ol>



**Table 6**

EU#	REPORTING REQUIREMENTS
EU#1	<p>In accordance with the provisions of the Final 7.02 Air Quality Plan Approval Transmittal# W 21004212(A) the Permittee is subject to the terms and conditions presented in Table 6 and to other terms and conditions reference herein.</p> <ol style="list-style-type: none"> <li>1. The Permittee shall report to the Department of Environmental Protection on a quarterly basis a summary of the continuous monitoring data (daily averages) and a quarterly excess emission report for Oxygen (O<sub>2</sub>), Nitrogen Oxides (NO<sub>x</sub>), Ammonia (NH<sub>3</sub>), Sulfur Dioxide (SO<sub>2</sub>) and Carbon Monoxide (CO) in accordance with Plan Approval #W21004212(A). Hourly emission data for the pollutants shall remain on site and be made available to Department personnel upon request.  CEM data for NO<sub>x</sub>, NH<sub>3</sub>, SO<sub>2</sub>, and CO shall be reported in pounds per hour (lb/hr) and pounds per million BTU (lb/MMBtu). The reports are due by January 15, April 15, July 15 and October 15 of each year.</li> <li>2. In accordance with Plan Approval # W21004212(A), the Department of Environmental Protection shall be notified at least 24 hours in advance of any planned shutdown of major plant equipment.</li> <li>3. The Department of Environmental Protection shall be notified in writing within 10 days of any action taken by the Permittee to wood fuel suppliers that occur as a result of said suppliers delivering non-conforming fuel as a requirement of Plan Approval #W21004212(A).</li> <li>4. Upon the Department's request, any records required by the applicable requirements identified in Section 5 of the operating permit, or the emissions of any air contaminant from the facility, shall be submitted to the Department within 30 days of the request by the Department, or within a longer time period if approved in writing by the Department. Said response shall be transmitted on paper, on computer disk, or electronically at the discretion of the Department, pursuant to 310 CMR 7.00 Appendix C(10)(a) incorporated herein by reference.</li> <li>5. The Permittee shall report to the Department of Environmental Protection, Bureau of Waste Prevention, Central Regional Office, Compliance and Enforcement Section within four (4) hours (or as soon as reasonably practical) by telephone, fax or electronically and in writing within two (2) days of discovery of any UPSETS or MALFUNCTIONS to facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and /or a condition of air pollution.</li> <li>6. Summarize and submit to the Department the results of stack testing as prescribed in the Department's approved pretest protocol stack testing that was determined by the Department to be necessary to ascertain compliance with Department's regulations or design approval provisos in accordance with 310 CMR 7.13(1) and 310 CMR 7.13(2).</li> <li>7. In accordance with 310 CMR 7.12(3), the facility shall annually register on a form obtained from the Department such information as the Department may specify including: <ol style="list-style-type: none"> <li>a. A description of the facility, including a description of process and combustion equipment, a description of facility operating hours and operating schedule, a description of all raw materials and fuels used at the facility.</li> <li>b. Information required by 310 CMR 7.12(3) shall be submitted pursuant to 310 CMR 7.12(2).</li> </ol> </li> <li>8. All required reports must be certified by a responsible official of the Permittee as provided in 310 CMR 7.00: Appendix C((10)(h).</li> </ol>

### C. GENERAL APPLICABLE REQUIREMENTS

The Permittee shall comply with all generally applicable requirements contained in 310 CMR 7.00 et. seq. and 310 CMR 8.00 et. seq., when subject.

### D. REQUIREMENTS NOT CURRENTLY APPLICABLE

The Permittee is currently not subject to the following requirements and specifically requested that the following regulations be inserted into Table 7.

<b>Table 7</b>	
REGULATION	DESCRIPTION
310 CMR 7.16	Reduction of Single Occupant Commuter Vehicle Use
310 CMR 7.25	Consumer and Commercial Products
40 CFR Part 82	Protection of Stratospheric Ozone
42 U.S.C. 7401, Section 112	Hazardous Air Pollutants
42 U.S.C. 7401, Section 112(r)	Prevention of Accidental Releases

## **5. SPECIAL TERMS AND CONDITIONS**

The Permittee is subject to the following special terms and conditions in accordance with Plan Approval #W21004212(A).

The Permittee is subject to the following special provisions that are not contained in Table 3, 4, 5, and 6:

<b>Table 8</b>	
<b>SPECIAL TERMS AND CONDITIONS</b>	
EU #1	<p>A. <u>GENERAL</u></p> <p>The emissions from the boiler shall be emitted to the ambient air through an existing round metal stack. The stack height shall be 180-feet above ground level with an inside exit diameter of six-feet which provides for an exit velocity of 52 feet per second at a temperature of 340°F.</p> <ol style="list-style-type: none"> <li>The Permittee shall conduct soot blowing a minimum of once per day or more frequently if necessary to prevent a condition of air pollution from occurring.</li> <li>Normal operating temperature shall be maintained when combusting solid fuel with the exception of startup and shutdown. Operating temperature is considered to be turbulent flue gas temperature of 1600°F as measured at the Department approved monitoring location for temperature.</li> <li>The Permittee shall ensure that the delivery of the wood-fuel and paper cubes shall be done in covered leak proof containers.</li> </ol>

Table 8 Continued	
SPECIAL TERMS AND CONDITIONS	
EU #1	<p>4. The central operations building must be under negative pressure at all times.</p> <p>5. The Permittee shall only burn “wood-fuel” that meets the definition in the 310 CMR 7.00 Air Pollution Control Regulations listed below:</p> <p>a) “<u>Wood Fuel</u>” means all wood intended to be used as a fuel included but not limited to trees, cord wood, logs, lumber, sawdust, and wood from manufacturing processes (but offs, shavings, turnings, sawdust, etc.), wood pallets, slabs, bark, chips, waste pallets, boxes, etc. This definition does not include materials, which are chemically treated with any preservative, paint, or oil.</p> <p>b) Any deviation from the wood-fuel noted above will require the Permittee to submit additional information for evaluations by DEP. Written approval from the Department is required prior to its use.</p> <p>c) The Department may take as many samples of the wood fuel as deemed necessary to ensure compliance with the fuel specifications. Any such samples shall be tested by an independent lab of the Department’s choosing. All lab expenses shall be paid for by the Permittee.</p> <p>d) There shall be no burning of “Hazardous Waste” as defined in 310 CMR 7.00, sludge, non-compatible wastes, nor un-permitted storage of the same.</p> <p><b>B. <u>Air Pollution Controls</u></b></p> <p>a) <u>Particulate Matter</u>-The particulate matter emissions will be controlled by a primary and secondary control device.</p> <ul style="list-style-type: none"> <li>• Primary Control Device – shall consist of a dry mechanical dust collector (dry multiclone), manufactured by Zurn Industries, model #MTSA-96-11.5CYT-XDNRV-STD or equivalent to remove the large coarse particles from the gas stream prior to entering the dry air filter system. The dry multiclone consists of one module with 96 tubes. The unit will operate at a pressure drop of 4 inches of water and on overall collection efficiency of 85%. The particulates captured will be removed on a continuous basis through the rotary air lock valves and transferred to a discharge conveyor system.</li> <li>• Secondary Control Device – shall be a positive air filter system manufactured by Brandt Environmental Corporation, model #6-224-174 or equivalent with 1536 non-woven bags (1536 represents 6 modules each with 256 bags) providing a bag surface area of 33,788 square feet providing an air to cloth ratio of approximately 3.92 to 1. The unit shall be designed to handle at least 93,893 ACFM with a pressure drop not to exceed 7 inches of water with an overall collection efficiency of +99% and a stated emission rate not to exceed 0.016 pounds per million BTU while operating at 100% rated capacity. The bags will be cleaned as determined by the pressure drop gauge and scheduled maintenance.</li> <li>• The fly ash collected in the hopper will be continuously discharged by a screw conveyor. The fly ash collected shall be mixed with bottom ash and removed from the facility by a Department approved contractor.</li> </ul>

**Table 8 Continued**

**SPECIAL TERMS AND CONDITIONS**

EU #1

- b) Nitrogen Oxides will be controlled by the use of Selective Non Catalytic Reduction (SNCR) Technology. The urea mixed with water and other chemicals is delivered to the facility and transferred to a 10,000-gallon storage tank. The enhanced urea (ammonia) will then be pumped into a series of air atomizing spray nozzles at low pressure and injected into the combustion gases of the boiler. Actual NOx removal efficiencies will range from 35 % to 70%.
- The ammonia slip (the emissions of ammonia to the ambient air) shall not exceed 10 PPM during all modes of operation.
  - The urea storage tank shall be equipped with high and low level audible alarm monitors. The high and low alarm set points should be set such as to allow ample margin of error so as to prevent over-filling at the high levels and to prevent loss of catalytic control of exhaust gases at low urea supply levels.
  - The Permittee shall store the standard operating and maintenance procedures for the urea handling system in a convenient location (control room) and make them readily available to all employees.

**C. LANDFILL GAS**

- a) The operation of the boiler and the gas extractor system shall not result in the release of raw untreated landfill gas to the ambient air.
- b) A 98% minimum destruction efficiency of landfill gas shall be achieved from the boiler.

**D. ASH**

- a)) The fly ash from the bag-house control device shall be mixed with the bottom ash after leaving the water conditioning area. The combined ash shall have a moisture content sufficient to minimizing fugitive dust emissions and minimizing excessive moisture content.
- b) The storing and transporting of ash at the facility shall be done in covered, leak proof containers. Other methods utilized to prevent fugitive dust emissions during storage and transfer must be equally effective and must be approved by the Department.
- c) Ash sampling and any ash handling and disposal requirements shall be in accordance with 310 CMR 19.000 .

**E. Paper Derived Supplemental Fuel (PDSF)**

The Permittee shall retrieve a random sample of the PDSF once per month and analyze the sample for Chlorine. The sampling report shall be submitted to this office within thirty (30) days of obtaining the sample. This sampling program shall continue for 12 months. The Department reserves the right to increase the frequency of sampling or require additional testing.

**Table 8 Continued**

**SPECIAL TERMS AND CONDITIONS**

EU #1

**F. NOISE REQUIREMENTS**

- a) Department Noise Policy 90-001 provides that an increase in sound by more than 10dBA over the existing L90 ambient level (1-hour A-weighted), unless otherwise specified will be considered a violation of the air quality regulations. Additionally, pure tone sounds, defined, as any octave band level, which exceeds the levels in adjacent octave bands by 3dBA or more, will also be a violation of 310 CMR 7.10.
- b) The Permittee shall install and have operational noise suppressants (muffler) on all steam release vents so that sound emissions from the boiler will not cause or contribute to a condition of air pollution pursuant to 7.01.
- c) The PDSF operation including the grinding and air handling system shall be equipped with a state of the art noise abatement enclosure. The state of the art enclosure shall include, as a minimum, four acoustically treated walls and roof. The walls and roof shall be constructed of materials designed for maximum noise attenuation.

**G. RATA/CGA REPORTING REQUIREMENTS**

The Permittee in lieu of submitting the full test reports, only the data assessment summary reports required by 40 CFR 60 Appendix F, Procedure 1, Section 7 shall be submitted to the regional office. The full test reports shall be maintained on site for five years as specified in this operating permit.

**6. ALTERNATIVE OPERATING SCENARIOS**

The Permittee did not request alternative operating scenarios in its operating permit application.

**7. EMISSIONS TRADING**

**(a). Intra-facility emission trading**

The Permittee did not request intra-facility emissions trading in its operating permit application.

Pursuant to 310 CMR 7.00: Appendix C(7)(b), emission trades, provided for in this permit, may be implemented provided the Permittee notifies The United States Environmental Protection Agency (EPA) and the Department at least fifteen (15) days in advance of the proposed changes and the Permittee provides the information required in 310 CMR 7.00: Appendix C(7)(b)3.

Any intra-facility change that does not qualify pursuant to 310 CMR 7.00: Appendix C(7)(b)2. is required to be submitted to the Department pursuant to 310 CMR 7.00: Appendix B.

(b). Inter-facility emission trading

The Permittee did not request inter-facility emissions trading in its operating permit application.

All increases in emissions due to emission trading, must be authorized under the applicable requirements of 310 CMR 7.00: Appendix B (the "Emissions Trading Program") and the 42 U.S.C. §7401 et seq. (the "Act"), and provided for in this permit.

**8. COMPLIANCE SCHEDULE**

The Permittee has indicated that the facility is in compliance and shall remain in compliance with the applicable requirements contained in Sections 4 and 5.

In addition, the Permittee shall comply with any applicable requirements that become effective during the permit term.

**GENERAL CONDITIONS FOR OPERATING PERMIT**

**9. FEES**

The Permittee has paid the permit application processing fee and shall pay the annual compliance fee in accordance with the fee schedule pursuant to 310 CMR 4.00.

**10. COMPLIANCE CERTIFICATION**

All documents submitted to the Department shall contain certification by the responsible official of truth, accuracy, and completeness. Such certification shall be in compliance with 310 CMR 7.01(2) and contain the following language:

"I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

The "Operating Permit Reporting Kit" contains instructions and the Annual Compliance Report and Certification and the Semi-Annual Monitoring summary Report and Certification. The "Operating Permit Reporting Kit" is available to the Permittee via the Department's web site. <http://www.state.ma.us/dep/bwp/daqc/daqforms.htm>.

(a) Annual Compliance Report and Certification

The Responsible Official shall certify, annually for the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30<sup>th</sup> to the Department and to the Regional Administrator, U.S. Environmental Protection Agency - New England Region. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- i. the terms and conditions of the permit that are the basis of the certification;
- ii. the current compliance status and whether compliance was continuous or intermittent during the reporting period;
- iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and
- iv. any additional information required by the Department to determine the compliance status of the source.

(b) Semi-Annual Monitoring Summary Report and Certification

The Responsible Official shall certify, semi-annually on the calendar year, that the facility is in compliance with the requirements of this permit. The report shall be postmarked or delivered by January 30<sup>th</sup> and June 30<sup>th</sup> to the Department. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

- i. the terms and conditions of the permit that are the basis of the certification;
- ii. the current compliance status during the reporting period;
- iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
- iv. whether there were any deviations during the reporting period;
- v. if there are any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;
- vi. whether deviations in the reporting period were previously reported;
- vii. if there are any outstanding deviations at the time of reporting, the proposed date of return to compliance;
- viii. if the deviations in the reporting period have returned to compliance and date of such return to compliance; and
- ix. any additional information required by the Department to determine the compliance status of the source.

**11. NONCOMPLIANCE**

Any noncompliance with a permit condition constitutes a violation of 310 CMR 7.00: Appendix C and the Clean Air Act and is grounds for enforcement action, for permit termination or revocation; or for denial of an operating permit renewal application by the Department and/or EPA.

Noncompliance may also be grounds for assessment of administrative or civil penalties under M.G.L. c.21A, §16 and 310 CMR 5.00 and civil penalties under M.G.L. c.111, §142A and 142B. This permit does not relieve the Permittee from the obligation to comply with any other provisions of 310 CMR 7.00 or the Act, or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or Local rules and regulations, not addressed in this permit.

## **12. PERMIT SHIELD**

(a) This facility has a permit shield provided that it operates in compliance with the terms and conditions of this permit. Compliance with the terms and conditions of this permit shall be deemed compliance with all applicable requirements specifically identified in Sections 4, 5, 6, 7, and 8, for the emission unit as described in the Permittee's application and as identified in this permit.

Where there is a conflict between the terms and conditions of this permit and any earlier permit, the terms and conditions of this permit control.

(b) The Department has determined that the Permittee is not currently subject to the requirements listed in Section 4, Table 7.

(c) Nothing in this permit shall alter or affect the following:

- (i) the liability of the source for any violation of applicable requirements prior to or at the time of permit issuance.
- (ii) the applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or
- (iii) the ability of EPA to obtain information under 42 U.S.C. §7401, §114 or §303 of the Act.

## **13. ENFORCEMENT**

The following regulations found at 310 CMR 7.02(8)(h) Table 6 for wood fuel, 7.02(8)(i), 7.04(9), 7.05(8), 7.09 (odor), 7.10 (noise), 7.18(1)(b), 7.21, 7.22 and any condition(s) designated as "state only" are not federally enforceable because they are not required under the Act or under any of its applicable requirements. These regulations and conditions are not enforceable by the EPA. Citizens may seek equitable or declaratory relief to enforce these regulations and conditions pursuant to Massachusetts General Law Chapter 214, Section 7A.

All other terms and conditions contained in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by the Department, EPA, and citizens as defined under the Act.



A Permittee shall not claim as a defense in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**14. PERMIT TERM**

This permit shall expire on the date specified on the cover page of this permit, which shall not be later than the date five (5) years after the issuance of this permit.

Permit expiration terminates the Permittee's right to operate the facility's emission units, control equipment or associated equipment covered by this permit, unless a timely and complete renewal application is submitted at least 6 months before the expiration date.

**15. PERMIT RENEWAL**

Upon receipt of a complete and timely application for renewal, this facility may continue to operate subject to final action by the Department on the renewal application.

In the event the Department has not taken final action on the operating permit renewal application prior to this permit's expiration date, this permit shall remain in effect until the Department takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: Appendix C (13).

**16. REOPENING FOR CAUSE**

This permit may be modified, revoked, reopened, and reissued, or terminated for cause by the Department and/or EPA. The responsible official of the facility may request that the Department terminate the facility's operating permit for cause. The Department will reopen and amend this permit in accordance with the conditions and procedures under 310 CMR 7.00: Appendix C(14).

The filing of a request by the Permittee for an operating permit revision, revocation and reissuance, or termination, or a notification of a planned change or anticipated noncompliance does not stay any operating permit condition.

**17. DUTY TO PROVIDE INFORMATION**

Upon the Department's written request, the Permittee shall furnish, within a reasonable time, any information necessary for determining whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall furnish to the Department copies of records that the Permittee is required to retain by this permit.

**18. DUTY TO SUPPLEMENT**

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the source after the date a complete renewal application was submitted but prior to release of a draft permit.

The Permittee shall promptly, on discovery, report to the Department a material error or omission in any records, reports, plans, or other documents previously provided to the Department.

**19. TRANSFER OF OWNERSHIP OR OPERATION**

This permit is not transferable by the Permittee unless done in accordance with 310 CMR 7.00: Appendix C(8)(a). A change in ownership or operation control is considered an administrative permit amendment if no other change in the permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage, liability between current and new Permittee has been submitted to the Department.

**20. PROPERTY RIGHTS**

This permit does not convey any property rights of any sort, or any exclusive privilege.

**21. INSPECTIONS AND ENTRY**

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow authorized representatives of the Department, and EPA to perform the following:

- (a) enter upon the Permittee's premises where an operating permit source activity is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- (d) sample or monitor, at reasonable times, any substances or parameters for the purpose of assuring compliance with the operating permit or applicable requirements as per 310 CMR 7.00: Appendix C (3)(g) 12.

**22. PERMIT AVAILABILITY**

The Permittee shall have available at the facility at all times a copy of the materials listed under 310 CMR 7.00: Appendix C(10)(e) and shall provide a copy of the permit, including any amendments or attachments thereto, upon request by the Department or EPA.

**23. SEVERABILITY CLAUSE**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**24. EMERGENCY CONDITIONS**

The Permittee shall be shielded from enforcement action brought for noncompliance with technology-based<sup>1</sup> emission limitations specified in this permit as a result of an emergency<sup>2</sup>.

In order to use emergency as an affirmative defense to an action brought for noncompliance, the Permittee shall demonstrate the affirmative defense through properly signed, contemporaneous operating logs, or other relevant evidence that:

- (a) an emergency occurred and that the Permittee can identify the cause(s) of the emergency;
- (b) the permitted facility was at the time being properly operated;
- (c) during the period of the emergency the Permittee took all reasonable steps as expeditiously as possible to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and
- (d) the Permittee submitted notice of the emergency to the Department within two (2) business days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

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<sup>1</sup> Technology-based emission limits are those established on the basis of emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain health based air quality standard.

<sup>2</sup> An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of this source, including acts of God, which situation would require immediate corrective action to restore normal operation, and that causes the source to exceed a technology based limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operations, operator error or decision to keep operating despite knowledge of any of these things.

If an emergency episode requires immediate notification to the Division of Hazardous Waste/Emergency Response and the Emergency Response Planning Council, immediate notification to the appropriate parties should be made as required by law.

**25. PERMIT DEVIATION**

Deviations are instances where any permit condition is violated and not reported as an emergency pursuant to section 24 of this permit. Reporting a permit deviation is not an affirmative defense for action brought for noncompliance

The Permittee shall report to the Central Regional Office Bureau of Waste Prevention, Compliance and Enforcement Section the following deviations from permit requirements, within 4 hours (or as reasonably practical), by telephone, fax, or electronically and in writing within two days of discovery of such deviation:

- Unpermitted pollutant releases, excess emissions or opacity exceedances measured directly by CEMS/COMS, by EPA reference methods or by other credible evidence, which are ten percent (10%) or more above the emission limit.
- Exceedances of parameter limits established by your Operating Permit or other approvals, where the parameter limit is identified by the permit or approval as surrogate for an emission limit.
- Exceedances of permit operational limitations directly correlated to excess emissions.
- Failure to capture valid emissions or opacity monitoring data or to maintain monitoring equipment as required by statutes, regulations, your Operating Permit, or other approvals.
- Failure to perform QA/QC measures as required by your Operating Permit or other approvals for instruments that directly monitor compliance.

For all other deviations, two (2) day notification is waived and is satisfied by the documentation required in the subsequent Semi-Annual Monitoring Summary and Certification. Instructions and forms for reporting deviations are found in the Massachusetts Department of Environmental Protection Bureau of Waste Prevention Air Operating Permit Reporting Kit, which is available to the Permittee via the Department's web site, <http://www.state.ma.us/dep/bwp/daqc/aqforms.htm>. This report shall include the deviation, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and the corrective actions or preventative measures taken.

Deviations that were reported by telephone, fax or electronically within 4 hours (or as soon as reasonably practical) of discovery, said deviations shall also be submitted in writing via the Operating Permit Deviation Report to the regional Bureau of Waste Prevention within two (2) days of discovery. For deviations, which do not require 4-hour (or as soon as reasonably practical) verbal notification, follow-up reporting requirements are satisfied by the documentation required in the aforementioned Semi-Annual Monitoring Summary and Certification.

**26. OPERATIONAL FLEXIBILITY**

The Permittee is allowed to make changes at the facility consistent with 42 U.S.C. §7401, §502(b)(10) not specifically prohibited by the permit and in compliance with all applicable regulations provided the Permittee gives the EPA and the Department written notice fifteen days prior to said change; notification is not required for exempt activities listed at 310 CMR 7.00: Appendix C(5)(i). The notice shall comply with the requirements stated at 310 CMR 7.00: Appendix C(7)(a) and will be appended to the facility's permit. The permit shield allowed for at 310 CMR 7.00: Appendix C(12) shall not apply to these changes.

**27. MODIFICATIONS**

(a) Administrative Amendments - The Permittee may make changes at the facility which are considered administrative amendments pursuant to 310 CMR 7.00: Appendix C(8)(a)1., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(b).

(b) Minor Modifications - The Permittee may make changes at the facility which are considered minor modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)2., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(d).

(c) Significant Modifications - The Permittee may make changes at the facility which are considered significant modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)3., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(c).

(d) No permit revision shall be required, under any approved economic incentives program, marketable permits program, emission-trading program and other similar programs or processes, for changes that are provided in this operating permit. A revision to the permit is not required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program under Title IV of the Act, provided that such increases do not require an operating permit revision under any other applicable requirement.

**APPEAL CONDITIONS FOR OPERATING PERMIT**

This permit is an action of the Department. If you are aggrieved by this action, you may request an adjudicatory hearing within 21 days of issuance of this permit. In addition, any person who participates in any public participation process required by the Federal Clean Air Act, 42 U.S.C. §7401, §502(b)(6) or under 310 CMR 7.00: Appendix C(6), with respect to the Department's final action on operating permits governing air emissions, and who has standing to sue with respect to the matter pursuant to federal constitutional law, may initiate an adjudicatory hearing pursuant to Chapter 30A, and may obtain judicial review, pursuant to Chapter 30A, of a final decision therein.

If an adjudicatory hearing is requested, the facility must continue to comply with all existing federal and state applicable requirements to which the facility is currently subject, until a final decision is issued in the case or the appeal is withdrawn. During this period, the application shield shall remain in effect, and the facility shall not be in violation of the Act for operating without a permit.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the permit is not consistent with applicable laws and regulations. The hearing request along with a valid check payable to The Commonwealth of Massachusetts in the amount of one hundred dollars (\$100.00) must be mailed to The Commonwealth of Massachusetts, Department of Environmental Protection, P.O. Box 4062, Boston, MA 02211.

The request will be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency) county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

The Department may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

## **28. LEGEND OF ABBREVIATED TERMS IN OPERATING PERMIT**

lb/MMBtu – Pounds Per Million British Thermal Units

lb/hr - Pounds Per Hour

°F - Fahrenheit

10<sup>6</sup> BTU/hr - 1,000,000 BTU Per Hour

AQCR - Air Quality Control Region

BWP - Bureau of Waste Prevention

CEM - Continuous Emission Monitor

CERO - Central Regional Office

CO - Carbon Monoxide

EU# - Emission Unit Number

EPA - Environmental Protection Agency

FMF NO. - Facility Master File Number

FMF RO NO. - Facility Master File Regulated Object Number

FT<sup>3</sup>/day - Cubic Feet Per Day

MADEP - Massachusetts Department of Environmental Protection

MMBtu/hr - Million British Thermal Units Per Hour

MMCF - Millions of Cubic Feet

NH<sub>3</sub> - Ammonia

NO<sub>x</sub> - Nitrogen Oxides

PB - Lead

PDSF - Paper Derived Supplemental Fuel

PLT ID - Plant Identification

PM - Particulate Matter

PPMVD - Parts Per Million Volume Dry

PTE - Potential To Emit

SNCR – Selective Non-Catalytic Reduction

SO<sub>2</sub> - Sulfur Dioxide

SSEIS - Stationary Source Emission Inventory System

TPY - Tons Per Year

VOC - Volatile Organic Compounds